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(56) Documents Cited

GB 2247727 A GB 2195109 A EP 0239987 A2  
EP 0165078 A2 WO 91/06448 A1 US 4964677 A  
US 4951776 A US 4928506 A US 4721192 A

(58) Field of Search

UK CL (Edition K ) F2F FHD  
INT CL<sup>5</sup> B60R , B60T  
Online databases:WPI

(54) Vehicle anti theft device

(57) This Anti Theft Device allows you on leaving your vehicle to simply depress the brake pedal or lever, and then operate a valve in the braking system to leave the vehicle with all the road wheel brakes on. The valve may be operated by a key or by a remote controlled electronic device, and may, when closed, immobilize the engine. An audible and visual alarm may be operated, when the valve is closed and the driver attempts to start its vehicle engine by turning the ignition key.

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## VEHICLE ANTI THEFT DEVICE

The braking system of most vehicles operate on the Hydraulic System. Virtually all motor cars, light commercials and motorcycles have this system as standard. Some systems are power assisted in various ways that multiply the pressure applied to the pedal or lever. Some systems are more complexed than others, having Anti Skid and Dual Circuit Systems. They all rely on oil under pressure flowing in one direction to put the brakes on, and when the pressure is released to flow back again allowing the brakes to be released.

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This invention is to incorporate a valve, as yet unspecified in design, but probably of a simple gate valve type, into the Hydraulic braking system of a Motorcar, Light Commercial, Motorcycle or any other Hydraulically braked vehicle. The valve would need to be of a suitable type, capable of accommodating and keeping separate the Dual Circuit Systems, with a view to arresting the flow of oil in each system. A good quality security system, probably of a barrel lock and key, or maybe Remote Controlled Electronic Device, to be attached to the valve in such a manner as to allow the key to operate the valve and the complete component be tamperproof. This component, hence forth called the Valve Component, then to be mounted in a suitable position accessable by the driver, probably in or under the dashboard of a car, or any appropriate position on a Motorcycle. The Hydraulic system interrupted at a point after the power assistance if fitted, and in, or preferably after the master cylinder in either case. A most logical area would be to interrupt the rigid brake pipe system, divert the pipes from the master cylinder to the valve of the valve component, then from the valve to their original destination. With the valve in the open position it would be possible to press the brake pedal or lever, utilizing the benefit of any power assistance provided, to put the road wheel brakes fully on. By holding the brakes on whilst turning the key(if that is the chosen security system) in the valve component and closing the valve,thus preventing the return of fluid or pressure, it is now possible to release the brake pedal or lever, and the road wheel brakes will remain on. As a safety precaution,when the valve is in the closed position and the vehicle ignition key turned, suitable warning of the closed valve be made to the driver audibly and visually via a series of electrical contacts or switches incorporated in the valve component. Also the engine be made not to start until the valve component key has opened the valve.

## CLAIMS

- 1 A Vehicle Anti Theft Device comprising of a security key operated valve incorporated in the vehicles hydraulic system.
- 2 A Vehicle Anti Theft Device as in Claim 1 wherein the valve may be operated by a remote controlled electronic device instead of a mechanical key, if deemed more appropriate on final manufacture.
- 3 A Vehicle Anti Theft Device as in Claim 1 and Claim 2 wherein the valve component to incorporate an electrical contact or switch or series of contacts or switches for the purpose of informing the driver that the valve is in operation. Also to immobilize the engine until the proper key is used to open the valve.
- 4 A Vehicle Anti Theft Device as in Claim 1 and Claim 2 and Claim 3 wherein the valve to be capable of closing off the Dual Circuit Systems simultaneously. Or by design alteration independantly if required.

Relevant Technical fields	Search Examiner
(i) UK CI (Edition K ) F2F (FHD)	
(ii) Int CI (Edition 5 ) B60R, B60T	P T SQUIRE
Databases (see over)	Date of Search
(i) UK Patent Office	
(ii) ONLINE DATABASES: WPI	16.11.92

Documents considered relevant following a search in respect of claims 1-4

Category (see over)	Identity of document and relevant passages	Relevant to claim(s)
X	GB 2247727 A (AI-HUA LO) see page 6 line 5 to page 7 line 4	2, 4
X	GB 2195109 A (DANIEL ET AL) see page 1 lines 36-50	1, 2, 3
X	EP 0239987 A2 (BARUCH) see column 3 lines 37-56	1, 4
X	EP 0165078 A2 (MCCASKIE) see page 5 line 10 to page 7 line 13	1, 3, 4
X	WO 91/06448 A1 (PHILLIPS)	1, 3, 4
X	US 4964677 (SPLINTER) see column 2 line 38 to column 3 line 11	1, 3, 4
X	US 4951776 (SETER) see column 3 line 57 to column 4 line 2	1
X	US 4928506 (RADZIEWICZ) see column 4 lines 9-25	1
X	US 4721192 (CANO/SPECTOR) see column 2 lines 31-60	1, 3

## **Categories of documents**

**X:** Document indicating lack of novelty or of inventive step.

**Y:** Document indicating lack of inventive step if combined with one or more other documents of the same category.

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